

Listing of the Claims

1. (Currently amended) An apparatus comprising:

a tamper resistant digital content recovery module to recover protected digital contents of various types in an obfuscated manner;

a plurality of plain text digital content rendering modules communicatively coupled with each other in a hierarchical manner forming a hierarchy of modules, with selective combinations of the plain text digital content rendering modules which to be selectively employed to render the recovered digital contents of the various corresponding types, including one of the plain text digital content rendering modules occupying a root position of the hierarchy to exclusively receive all types of the recovered digital contents to be rendered, ~~of all types,~~ from the tamper resistant digital content recovery module;

one or more storage units operative to store said tamper resistant module and said plurality of plain text digital content rendering modules; and

a processor coupled with the one or more storage units to execute the tamper resistant module and the plurality of plain text digital content rendering modules.

2. (Currently amended) The apparatus of claim 1, wherein the tamper resistant digital content recovery module is equipped to verify ~~to its satisfaction that~~ the plain text digital content rendering module occupying the root position of the hierarchy has not having been compromised, and to provide recovered digital content to the plain text digital content rendering module occupying the root position of the hierarchy, only upon ~~having~~ verified ~~to its satisfaction that~~ the plain text digital content rendering module occupying the root position of the hierarchy has not having been compromised.

3. (Currently amended) The apparatus of claim 2, wherein the tamper resistant digital content recovery module is equipped to verify the plain text digital content

rendering module occupying the root position of the hierarchy, responsive to a request from the plain text digital content rendering module occupying the root position of the hierarchy to recover a protected digital content.

4. (Currently amended) The apparatus of claim 3, wherein the tamper resistant digital content recovery module is equipped to verify the plain text digital content rendering module occupying the root position of the hierarchy by verifying a signature of the plain text digital content rendering module occupying the root position.

5. (Currently amended) The apparatus of claim 1, wherein the hierarchy of modules includes a module occupying a non-leaf position in the hierarchy and a module occupying an immediate downstream position in the hierarchy from the non-leaf plain text digital content rendering module, and each of at least a subset of the non-leaf plain text digital content rendering modules is equipped to verify to its satisfaction that the immediate downstream plain text digital content rendering module or modules, if any, have as not having been compromised.

6. (Currently amended) The apparatus of claim 5, wherein each of the subset of the non-leaf plain text digital content rendering modules is equipped to verify to satisfaction that the immediate downstream plain text digital content rendering module or modules hasve not having been compromised, at least during initialization.

7. (Currently amended) The apparatus of claim 6, wherein each of the subset of the non-leaf plain text digital content rendering modules is equipped to further verify to its satisfaction that anthe immediate downstream plain text digital content rendering module or modules remains un-compromised before each transfer of recovered digital content to the immediate downstream plain text digital content rendering module.

8. (Currently amended) The apparatus of claim 5, wherein ~~each of the subset of the non-leaf plain text digital content rendering modules~~ is equipped to verify ~~to its satisfaction that the immediate downstream plain text digital content rendering module or modules have as not having~~ been compromised by verifying ~~corresponding a signature or signatures of the immediate downstream plain text digital content rendering module or modules.~~

9. (Currently amended) The apparatus of claim 1, wherein the digital content of various types comprises streaming media contents of a plurality of media, and of a plurality of format types.

10. (Currently amended) The apparatus of claim 1, wherein the apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook computer, a set-top box, a desktop computer, a single processor server, a multi-processor server, or and a cluster of coupled systems.

11. (Original) The apparatus of claim 1, wherein a first subset of the plain text digital content rendering modules are member modules of a first application domain, and a second subset of the plain text digital content rendering modules are member modules of a second application domain.

12. (Currently amended) A processor implemented method, comprising:
a root one of a plurality of hierarchically organized plain text digital content rendering modules collectively equipped adapted to render digital contents of a plurality of types;

requesting a tamper resistant digital content recovery module to recover a first protected digital content of a first type;

verifying with the tamper resistant digital content recovery module verifying that said root one of the plurality of hierarchically organized plain text digital content rendering modules has not been comprised;

recovering with the tamper resistant digital content recovery module recovering the first protected digital content in an obfuscated manner; and

transferring the recovered first digital content to said root one of the plurality of hierarchically organized plain text digital content rendering modules; and

rendering with said root one in conjunction with first at least one other one of said plurality of hierarchically organized plain text digital content rendering modules rendering said first digital content; and

verifying with each of said root and non-leaf ones, if any, of said first other ones of said plurality of hierarchically organized digital content rendering modules verifying of the modules that one of the first at least one other one of the modules occupying an immediate downstream position in the hierarchy of modules from the root module, is uncompromised before transferring the first digital content to the verified immediate downstream module to further the rendering of the first digital content.

13. (Currently amended) The method of claim 12, wherein the tamper resistant module verifies the root one of the plurality of hierarchically organized plain text digital content rendering modules by verifying ~~its~~the root one's signature.

14. (Currently amended) The method of claim 12, wherein ~~each of~~said root and non-leaf ones, if any, of said first other ones of said plurality of hierarchically organized digital content rendering modules verifies the~~an~~ one of the first one other one that

occupies an immediate downstream position in the hierarchy of modules from the root
module is uncompromised by verifying the immediate downstream module's signature.

15. (Currently amended) The method of claim 12, wherein the method further comprises ~~each of said root and non-leaf ones, if any, of said first other ones of said plurality of hierarchically organized digital content rendering modules verifies it~~
each module occupying an immediate downstream position in the hierarchy of modules
from or the root modules, if any, during initialization.

16. (Currently amended) The method of claim 12, wherein the method further comprises

the root one of the plurality of hierarchically organized plain text digital content rendering modules requesting the tamper resistant digital content recovery module to recover a second protected digital content of the same first type;

the tamper resistant digital content recovery module verifying that said root one of the plurality of hierarchically organized plain text digital content rendering modules has not been comprised;

the tamper resistant digital content recovery module recovering the second protected digital content in an obfuscated manner, and transferring the recovered second digital content to said root one of the plurality of hierarchically organized plain text digital content rendering modules; and

said root one in conjunction with the same first at least one other one of said plurality of hierarchically organized digital content rendering modules rendering said second digital content, with ~~each of said root and same non-leaf ones, if any, of said first at least one other one of said plurality of hierarchically organized digital content rendering modules re-verifying the~~an same immediate downstream module is

uncompromised before transferring the second digital content to the immediate downstream module to further the rendering of the second digital content.

17. (Currently amended) The method of claim 12, wherein the method further comprises

the root one of the plurality of hierarchically organized plain text digital content rendering modules requesting the tamper resistant digital content recovery module to recover a second protected digital content of a second type;

the tamper resistant digital content recovery module verifying that said root one of the plurality of hierarchically organized plain text digital content rendering modules has not been comprised;

the tamper resistant digital content recovery module recovering the second protected digital content in an obfuscated manner, and transferring the recovered second digital content to said root one of the plurality of hierarchically organized plain text digital content rendering modules; and

said root one in conjunction with second at least one other one of said plurality of hierarchically organized digital content rendering modules rendering said second digital content, with each of said root and non-leaf ones, if any, of said second at least one other one of said plurality of hierarchically organized digital content rendering modules verifying one of the second at least one other one occupying an immediate downstream position in the hierarchy of modules from the root module is uncompromised before transferring the second digital content to the immediate downstream module to further the rendering of the second digital content.

18. (Currently amended) An apparatus comprising:

a plurality of digital content rendering modules communicatively coupled with each other in a hierarchical manner forming a hierarchy of modules, with selective

combinations of which the modules to be selectively employed to protectively render digital contents of various corresponding types, including one of said digital content rendering modules occupying a root position of the hierarchy to exclusively receive the various types of digital contents to be rendered, of all types, from at least a separate recovery module not part of the hierarchy of modules, the recovery module being responsible for recovering the digital contents from their ciphered states, and each of the non-leaf ones of the digital content rendering root modules being responsible operative for verifying to its own satisfaction that its it's a module occupying an immediate downstream position in the hierarchy of modules fromer the root modules, if any, have as not having been compromised;

one or more storage units to store said plurality of digital content rendering modules; and

a processor coupled with the one or more storage units to execute the digital content rendering modules.

19. (Currently amended) The apparatus of claim 18, wherein the hierarchy of modules includes a module occupying a non-leaf position in the hierarchy and a module occupying an immediate downstream position in the hierarchy from the non-leaf module, and each of the non-leaf ones of the digital content rendering modules is equipped to verify to its satisfaction that the immediate downstream module or modules, if any, have as not having been compromised, at least during initialization.

20. (Currently amended) The apparatus of claim 18, wherein the hierarchy of modules includes a module occupying a non-leaf position in the hierarchy and a module occupying an immediate downstream position in the hierarchy from the non-leaf module, and each of the non-leaf ones of the digital content rendering modules is equipped to further verify to its the satisfaction that an immediate downstream digital

~~content rendering module~~ remains uncompromised before each transfer of digital contents to the immediate downstream digital content rendering module.

21. (Currently amended) The apparatus of claim 20, wherein the hierarchy of modules includes a module occupying a non-leaf position in the hierarchy and a module occupying an immediate downstream position in the hierarchy from the non-leaf module, and each of the non-leaf ones of the digital content rendering modules is equipped to verify to its satisfaction that the immediate downstream digital content rendering module or modules, if any, have as not having been compromised, by verifying corresponding a signature or signatures of the immediate downstream digital content rendering module or modules.

22. (Currently amended) The apparatus of claim 18, wherein the digital content of various types comprises streaming media contents of a plurality of media types, and of a plurality of format types.

23. (Currently amended) The apparatus of claim 18, wherein the apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook computer, a set-top box, a desktop computer, a single processor server, a multi-processor server, or and a cluster of coupled systems.

24. (Currently amended) The apparatus of claim 18, wherein a first subset of the ~~non-leaf modules~~ are member modules of a first application domain, and a second subset of the ~~non-leaf modules~~ are member modules of a second application domain.

25. (Currently amended) A processor implemented method comprising:

verifying with each-a root one of a plurality of hierarchically organized digital content rendering modules, verifying that to its satisfaction that each of its each module that occupies an immediate downstream position in the hierarchy of modules from the root module, if any, is as has not having been uncompromized, during an initialization period;

exclusively receiving with thea root one of the plurality of hierarchically organized digital content rendering modules exclusively receiving a first digital content of a first type; and

rendering in part with said root one of said modules in conjunction with first at least one other one of said plurality of hierarchically organized digital content rendering modules rendering said first digital content,-;

re-verifying with each of said root and non leaf ones of said modules that, if any, of said first other ones of said plurality of hierarchically organized digital content rendering modules further verifying one of the at least one other one of the modules occupying an immediate downstream position in the hierarchy of modules from the root module is uncompromised; and

before transferring with said root one of said modules the first digital content to the re-verified immediate downstream module to further the rendering of the first digital content.

26. (Currently amended) The method of claim 25, wherein each of said root and non leaf ones, if any, of said first other ones of said plurality of hierarchically organized digital content rendering modules verifies eachan immediate downstream module is uncompromised by verifying the immediate downstream module's signature.

27. (Currently amended) The method of claim 25, wherein the method further comprises

the root one of the plurality of hierarchically organized plain text digital content rendering modules receiving a second protected digital content of the same first type; and

 said root one in conjunction with the same first at least one other one of said plurality of hierarchically organized digital content rendering modules rendering said second digital content, with each of said root and ~~same non-leaf ones, if any, of the first at least one other one of said plurality of hierarchically organized digital content rendering modules~~ ~~re-verifying the same one of the first at least one other one an that occupies an immediate downstream position in the hierarchy of modules from the root~~ module is uncompromised before transferring the second digital content to the immediate downstream module to further the rendering of the second digital content.

28. (Currently amended) The method of claim 25, wherein the method further comprises

 the root one of the plurality of hierarchically organized plain text digital content rendering modules receiving a second protected digital content of a second type; and

 said root one in conjunction with second at least one other one of said plurality of hierarchically organized digital content rendering modules rendering said second digital content, with each of said root and ~~non-leaf ones, if any, of the second at least one other one of said plurality of hierarchically organized digital content rendering modules~~ ~~re-verifying one of the second at least one other one occupying an immediate downstream position in the hierarchy of modules from the root~~ module is uncompromised before transferring the second digital content to the ~~re-verified one of the second at least one other one occupying an immediate downstream position in the hierarchy of modules from the root~~ module to further the rendering of the second digital content.

29. (Currently amended) An article of manufacture comprising:

a recordable medium;

a first plurality of programming instructions recorded on said recordable medium, ~~with~~ said first programming instructions ~~designed~~ adapted to program a computing device, to implement on the computing device, a tamper resistant digital content recovery module to recover protected digital contents of various types in an obfuscated manner; and

a second plurality of programming instructions recorded on said recordable medium, ~~with~~ said second programming instructions ~~designed~~ operative to program the computing device, to implement on the computing device, a plurality of plain text digital content rendering modules, said rendering modules communicatively coupled with each other in a hierarchical manner forming to form a hierarchy of modules, ~~with selective combinations of~~ the plain text digital content rendering modules ~~which to be~~ being selectively employed in combination to render the recovered digital contents of the various corresponding types, including one of the plain text digital content rendering modules occupying a root position of the hierarchy to exclusively receive all types of the recovered digital contents to be rendered, ~~of all types,~~ from the tamper resistant digital content recovery module.

30. (Currently amended) The article of claim 29, wherein the tamper resistant digital content recovery module is equipped to verify ~~to its satisfaction~~ that the plain text digital content rendering module occupying the root position of the hierarchy has not been compromised, and to provide recovered digital content to the plain text digital content rendering module occupying the root position of the hierarchy, only upon having so verified ~~to its satisfaction~~ that the plain text digital content rendering module occupying the root position of the hierarchy has not been compromised.

31. (Currently amended) The article of claim 29, wherein the hierarchy of modules includes a module occupying a non-leaf position in the hierarchy and a module occupying an immediate downstream position in the hierarchy from the non-leaf module, and each of at least a subset of the plain text digital content rendering the non-leaf modules is equipped to verify to its satisfaction that the immediate downstream plain text digital content rendering module from the non-leaf module or modules, if any, have as not having been compromised.

32. (Currently amended) The article of claim 29, wherein the digital content of various types comprises streaming media contents of a plurality of media, and of a plurality of format types.

33. (Original) The article of claim 29, wherein the recordable medium is a selected one of a magnetically recordable medium and an optically recordable medium.